

## ABSTRACT

A system is presented for providing a middleware communication space that provides asynchronous message delivery service for partially connected mobile ad hoc networks. Embodiments of the present invention use mobile devices to bridge separated islands of networks and store and propagate messages. The system and software architecture supports methods for messaging caching, transferring and routing. More specifically, embodiments provide methods and systems that extend a communication space concept into a distributed environment and combine it with the standard Web Services technologies, i.e, SOAP, and WS series protocols. The communication space provides an extension of Web Services to mobile ad hoc networks and provides asynchronous message caching, transferring and routing.